

USER'S MANUAL

Smart Cane

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GETTING THE CANE READY

Ensure the cane has a 9v battery in place and the cane is powered on. After that, the cane will be ready to provide full support to the user through its various functionalities.

Which Hand Do You Cane With?

The most obvious answer to this question is that you cane with your dominant hand.

How and Where Do You Hold the Cane?

The handle goes diagonally across the palm and rests on the extended index finger. The other fingers curl around, and the thumb points over the handle and down the cane. The palm is vertical as when extended to shake hands. That is the classic grip which is used most of the time.

In close quarters where space is confined, slide your hand down the cane and narrow the swing. You may shift your grip and hold the cane comfortably. In very close, slow-moving crowds such as in lecture theaters or corridors; you may just hold the cane diagonally across the body and slide the cane along in front of your foot. At other times you may shift your grip to ease fatigue.

The firmness of the grip should be moderate, neither so tight that you never let go--you'll break the cane when it gets caught in a crack--nor so loose that every obstacle knocks it out of your hand.

Gently swing the cane from side to side with pressure of the wrist and fingers. The hand swings like a door with the hinge at the wrist. Pretty soon you will be almost flipping the cane back and forth with an easy, unconscious motion.

ACTUALLY WALKING AROUND

Rule One: "When the body is in motion, the cane is in rhythm." That means: tap the cane from side to side, one tap per step, about two inches beyond the width of your shoulders. Keep the tip low, but not constantly dragging on the ground.

The idea of Rule One is to clear an area, and step into it. Clear the next area, and step into it. Using this technique, you can learn to walk safely and with confidence.

The ultrasonic sensors positions at the end of the cane will automatically notify you the user whenever an obstacle of 2m in distance or less is in your path via sound emission as well as vibrations in the handle of the cane. The user should take heed to the warnings and try to move in a different path so that the beeping and vibration ceases which would notify the path is clear of obstacles.

What happens when I get lost?

Don't worry, if you should wander into unknown areas or out of bound areas for 2 minutes, distress signals containing your GPS position will be sent to a personal contact and campus police where they would then be able to log the coordinates in a GPS illustration system to pinpoint your exact location and get to you as soon as possible to offer assistance.

MAINTENANCE

It is advised that the smart cane should be properly cleaned by wiping down the frame of the cane and carefully wiping sensitive areas such as the ultrasonic sensors. In addition to cleaning, new batteries should be put into the power supply of the cane every 3 days or whenever functionality seems to be subpar due to lack of power (for example the sound being emitted when an obstacle is detected is very faint).

The micro SD card has a storage capacity of 1GB for storing your GPS coordinates throughout the cane's use at set time intervals. It is strongly advised for the memory to be dumped at the end of each day to avoid memory capacity being reached during use. The memory dump can be done by attaching the cane to a PC system via USB connection and manually delete the data from the SD card.

Where Does the Cane Go When Not in Use?

There are two horizontal dimensions and one vertical dimension. Find some place out of the way; lying on the floor under a chair or table, standing in a corner, or leaning against a wall. Be sure that the cane is lying flat on the floor and not resting on something that holds it an inch or two above the floor